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is an air gap between the outer surface of the shaft 5 and an inner circumference of the insulating disc 13. Gases can clearly flow through this air gap and into the bearing 3. Thus, the insulating disc 13 is structurally incapable of serving to provide a sealing effect as defined in the claims.

Further, the insulating disc 13 does not even satisfy the examiner's example of a "sufficient seal to prevent atmospheric gases from entering the bearing" because, as explained above, gases can clearly enter the bearing via a center opening in the insulating disc 13.

The examiner argues that it is "inherent" that there is a seal at this location in Thauer, however, the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." In re Rijckaert, 9 F.3d 1531, 1534; 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. There mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" In re Robertson, 169 F.3d 743; 49 USPQ2d 1949, 1950-1951 (Fed. Cir. 1999).

"In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). The examiner argues that the insulating disc 13 of Thauer is inherently a seal, however, this contradicts the Figure of Thauer, which shows a gap between the disc 13 and the shaft 5. The examiner has not provided any basis in fact or technical reasoning to support the assertion that gases do not leak through this gap into the bearing. Thus, claims 1, 3-5, 11, 13, and 16 are not anticipated by Thauer.

Claims 6 and 14-15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Thauer in view of Kipp et al. (US 5630571). For the reasons set forth above, Thauer does not disclose, suggest, or teach the claimed invention. Kipp does not make up for the deficiencies of Thauer.

Further, claim 14 recites that the bearing sleeve is press-fitted into the housing. The examiner argues that it would be obvious to replace the threaded attachment of Thauer with a

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press-fit attachment as taught by Kipp to secure the sleeve better. Applicant asserts that there is no motivation or suggestion to modify Thauer in the manner proposed by the examiner.

One of the benefits provided by Thauer is that the shaft 5, valve 7, bearing 3, spring 11, and lever 12 are pre-assembled as a unit prior to application to the pipe 2, such that the unit can be easily installed by threading the bearing 3 into the bore 1. The examiner's proposed modification would require the elimination of the threaded attachment assembly, which would defeat one of the benefits provided by Thauer. The examiner's proposed modification cannot render the prior art unsatisfactory for its intended purpose and cannot change the principle of operation of the base reference. See MPEP 2143.01. Further, there is no indication in Kipp that press-fit is more easily installed than a threaded attachment, and there is nothing in Kipp indicating that a press-fit is a more secure attachment than the threaded attachment. Thus, the claims are allowable over the recited combination.

Claims 7-10, 12, and 17-18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Thauer alone. For the reasons set forth above, Thauer does not disclose, suggest, or teach the claimed invention.

Claims 19-22 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Thauer in view of Lec (US 5631761) and Welty et al. (US 6935618). For the reasons set forth above, Thauer does not disclose, suggest, or teach the claimed invention. Neither Lee nor Welty make up for the deficiencies of Thauer.

Further, claim 19 recites a ceramic coating that is disposed on at least a portion of at least one of the valve spindle and the washer. The examiner argues that it would be obvious to modify Thauer to include a coating at this location to reduce friction between the bearing surfaces. Applicant disagrees.

The component in Thauer, which the examiner argues corresponds to the claimed washer, is element 13. As discussed above, there is no bearing or sealing surface between component 13 and shaft 5 of Thauer because these components do not touch each other. There is an air gap between the outer surface of shaft 5 and the inner circumference of the insulating disc 13. There would be no reason to modify these components to include anti-friction coatings because there is

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not a friction interface between these components. Thus, claims 19-22 are allowable over the recited combination.

Claims 23-25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Thauer in view of Rautenstauch (US 1991173). The examiner admits that Thauer does not disclose the features of claims 23-25 and relies on Rautenstauch for modifying Thauer. Claim 23 recites that the washer has a very close running clearance between an inner opening of the washer and the valve spindle to prevent gas from flowing between the washer and the valve spindle. The examiner argues that bolted down gland 36 has a running fit with stem 16 and a conical profile, and that this gland 36 is analogous to the spring 11 and washer 13 of Thauer. Applicant disagrees with this characterization of element 36 of Rautenstauch.

Element 36 comprises a gland that is used to enclose a packing 35 inside a retainer 26 fixed to a housing 10. Bolts 41 are threaded through the gland 36 and the retainer 26. First, this threaded attachment interface does not provide any type of resilient bias or spring force such as the spring 11 of Thauer, which holds sealing surfaces 9, 10 together. Second, the gland 36 does not provide any type of insulating function to shield a spring from the effect of heat from an exhaust pipe, such as that provided by the insulating disc 13 in Thauer. As the gland 36 of Rautenstauch is clearly neither a spring nor an insulating disc, applicant respectfully asserts that it is not reasonable to interpret the gland 36 as corresponding to the spring 11 and washer 13 of Thauer.

As such, Rautenstauch does not disclose a washer with a secondary sealing surface to prevent gas from flowing between the washer and the valve spindle as defined in the claims. As discussed above, the examiner has admitted that Thauer also does not disclose such a structure. Thus, the references do not disclose, suggest, or teach all of the claimed features.

Further, with regard to claims 23-25, the examiner argues that it would have been obvious to have used a packing and bearing configuration as taught by Rautenstauch in the valve of Thauer to improve the seal thereof. There is no support for the examiner's assertion found anywhere in the references. The examiner has pointed to no teaching in Rautenstauch of any particular benefit to using the Rautenstauch packing and bearing in place of the Thauer bearing configuration. In addition, there is nothing in Thauer that would have led one of ordinary skill in

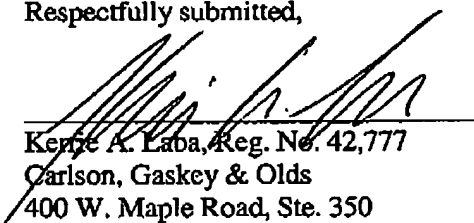
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the art to believe that Thauer's bearing was in any way deficient for Thauer's purposes or was in need of modification. The valve structures shown in Rautenstauch and Thauer are very different from each other and there is nothing in either of the references to indicate that the bearing configuration of Rautenstauch is in any way capable of being used in an exhaust valve application such as that of Thauer. There certainly is no suggestion in the references that the bearing configuration of Rautenstauch would provide a *better seal* than that of Thauer. The examiner is clearly engaging in a hindsight reconstruction of the claimed invention, using applicant's structure as a template and selecting elements from the references to fill the gaps. This is not the proper basis for sustaining a rejection under 35 U.S.C. 103(a).

Thus, for the reasons set forth above, claim 23 is allowable over the recited combination. For similar reasons claims 24 and 25 are also allowable.

Applicant asserts that all claims are now in condition for allowance and respectfully requests an indication of such. A check is enclosed to cover the cost of two additional dependent claims. Applicant believes that no additional fees are due, however, the Commissioner is authorized to charge Deposit Account No. 50-1482 in the name of Carlson, Gaskey & Olds for any additional fees.

Respectfully submitted,



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CERTIFICATE OF TRANSMISSION UNDER 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted to the United States patent and Trademark Office, fax number (571) 273-8300, on June 7, 2006.



Laura Combs